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⑭ 発明の名称 不特定話者の音声入力装置を用いたTV・及モニターディスプレイにおける字幕スーパー文字表示システムに関する方法

⑮ 特 願 昭60-106779  
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明細書

1. 発明の名称

不特定話者の音声入力装置を用いたTV・及モニターディスプレイにおける字幕スーパー文字表示システムに関する方法。

2. 特許請求の範囲

不特定話者の音声認識機能を有する音声入力装置を用い、音声を文字に変換し、モニター用テレビ及モニターディスプレイ画面下部へ字幕スーパーとして文字を表示する方法。

3. 発明の詳細な説明

モニターとして、使用中のテレビより音声信号を取り出し、不特定話者の音声認識機能を備えた音声入力装置へと入力する。音声入力装置により、その後文字に変換された電気信号をDVEを経て、モニターテレビへ、インバースし画面下部へ字幕スーパーとして、文字表示するものである。

同システムを使用することにより、難聴者においてもテレビ放送を享受することが可能となり、社会的にも有益である。

更に洋画等、音声多重放送による二カ国語放送時には使用中のテレビが音声多重チューナー内蔵であれば、同音声

での原語で聴取しながら日本語吹き替えの主音声を同システムに接続し、モニターテレビ上に表示された字幕スーパーの文字を読み取ることも可能となり、放送中の作品によってはオリジナリティ、イメージ、感性等が損われずに観賞できることとなる。

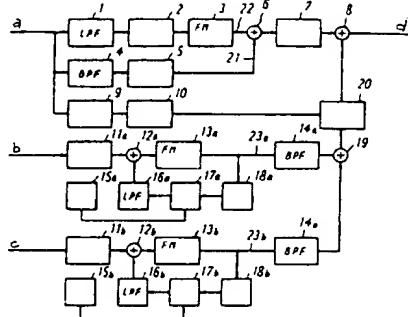
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## (54) SIGNAL PROCESS CIRCUIT FOR VIDEO DISK RECORDER

(11) 61-264879 (A) (43) 22.11.1986 (19) JP  
 (21) Appl. No. 60-106059 (22) 20.5.1985  
 (71) HITACHI LTD (72) MASUO OKU(2)  
 (51) Int. Cl<sup>4</sup>. H04N5/92, G11B7/00, G11B20/06, H04N9/83

**PURPOSE:** To reduce disturbance from an address signal to a sound signal by providing the carrier frequency of a sound FM signal at a frequency area between the fundamental harmonic component and the higher harmonic component of the address signal and increasing the level of the sound FM signal in an address signal period.

**CONSTITUTION:** A pair of sound signals are inputted to FM converters 13a and 13b through pre-emphasis circuits 11a and 11b, and adder circuits 12a and 12b respectively and are outputted as sound FM signals 23a and 23b. The frequency bands of these sound FM signals 23a and 23b are selected so as to be the frequency area between the frequency areas of the fundamental harmonic and of the higher harmonic (mainly tertiary) of the address signal. Noise to the sound signal is reduced because the level of the address signal is relatively low. Furthermore, the signal amplitudes of the sound FM signals 23a and 23b from the third mixing circuit 19 are increased by a gain variable circuit 20 in which the gain of the signals are increased only for the period given from an address period signal generating circuit 10. Therefore, the disturbance from the address signal to the sound signal is reduced to the level not troublesome for an aural sensitivity.



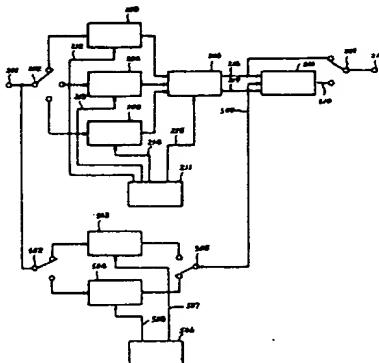
2: pre-emphasis circuit, 3: FM modulating circuit, 5: down converter, 7: trap circuit, 9: synchronizing separator circuit, 15a,15b: reference as cillaing circuit, 17a,17b: phase comparison circuit, 18a,18b: dividing circuit, a: composite video signal, b,c: sound signal, d: recording signal

## (54) SIGNAL CONVERSION CIRCUIT FOR DIGITAL TELEVISION RECEIVER

(11) 61-264881 (A) (43) 22.11.1986 (19) JP  
 (21) Appl. No. 60-105819 (22) 20.5.1985  
 (71) HITACHI LTD (72) NOBUFUMI NAKAGAKI(2)  
 (51) Int. Cl<sup>4</sup>. H04N7/01, H04N11/20

**PURPOSE:** To suppress line flicker and to improve the resolution of a picture display in a vertical direction by considering an information regarding a corresponded scanning line in the previous field as the information of the scanning line to be interpolated when an interpolating scanning line is generated.

**CONSTITUTION:** With inputting a luminance signal to an input terminal 201, either of field memories 503 or 504 is selected and a picture information of one field is written on it. During the next one field period, the same information is read out two times at a time in order at the double speed of writing and is sent to an interpolating circuit 501. To the interpolating circuit 501, outputs 216 and 217 from a switch 206 are inputted and the output 216 is a signal delayed by 1H period against the output 217 and an output 509 is the signal delayed by a share of one field. The interpolating circuit 501 generates an interpolating signal 510 by changing the mixing ratio of the line informations 216 and 217 of the present field according to the line information 509 of the previous field. An original signal and the interpolating signal are outputted alternately, switching at a switch 209, to an output terminal 210 and the signal converted to one with a high picture quality having the double speed of an input signal is obtained.



203,204,205: line memory, 211: line memory control circuit, 506: field memory control circuit

## (54) METHOD REGARDING CAPTION-SUPERIMPOSED CHARACTER DISPLAY SYSTEM IN TV AND MONITOR DISPLAY USING VOICE INPUT DEVICE FOR UNSPECIFIED TALKER

(11) 61-264882 (A) (43) 22.11.1986 (19) JP  
 (21) Appl. No. 60-106779 (22) 18.5.1985  
 (71) MASAAKI KUWABARA (72) MASAAKI KUWABARA  
 (51) Int. Cl<sup>4</sup>. H04N7/08, H04N5/278

**PURPOSE:** To make a person who is hard of hearing enjoyable of broadcasting by converting voice to a character in a voice input device having the speech recognition function of an unspecified talker and displaying the character on a monitoring television and at the lower part of a monitor display picture as a caption superimpose.

**CONSTITUTION:** A sound signal taken out from a television in use as a monitor is inputted to a voice input device equipped with the speech recognition function of the unspecified talker. An electrical signal converted to the character afterwards by the voice input device is superimposed on the monitoring television through a DVE and it is displayed at the lower part of a picture display as the caption superimpose. By using the above system, it is possible to enjoy a television broadcasting for the person who is hard of hearing and also it is useful for a society. Furthermore, in a bilingual broadcasting by a sound multiplexing broadcasting, such as a foreign film, etc., when the television in use has a built-in sound multiplexing tuner, main voice of a stand-in to Japanese is connected to the system hearing original voice in subvoice and it is possible to read the caption superimpose displayed on the monitoring television and sensitivity, for example, is not hurt.